

AMENDMENTS TO THE CLAIMS

The following is a complete, marked-up listing of revised claims with a status identifier in parenthesis, underlined text indicating insertions, and strike through and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (Previously Presented) A method for post-processing of an amorphous, transparent polymeric optical element, which comprises:
 - a) mounting an amorphous polymeric optical element into a chamber;
 - b) introducing a compressed gas in a supercritical phase or a liquid or vapor phase approaching the supercritical phase as an annealing medium into the chamber and annealing the amorphous polymeric optical element; and
 - c) removing the annealing medium from the chamber.
2. (Previously Presented) The method of claim 1, wherein the amorphous polymeric optical element is made of an amorphous transparent polymer.
3. (Previously Presented) The method of claim 2, wherein the amorphous polymeric optical element is selected from the group consisting of polycarbonate, polystyrene, poly(methacrylate), poly(methyl-methacrylate), poly(trifluoro-methyl-methacrylate), poly(tetra-propyl-fluoro-methyl-methacrylate), Teflon AF, and cytop.
4. (Previously Presented) The method of claim 1, wherein the amorphous polymeric optical element is a plastic optical fiber.
5. (Cancelled).
6. (Previously Presented) The method of claim 1, wherein the compressed gas is a solvent or a non-solvent material for the polymeric optical element, or a mixture thereof.

7. (Original) The method of claim 6, wherein the annealing medium is a material selected from the group consisting of CO₂, SF₆, C₂H₆, CCl₃F, CClF₃, CHF₃, and isopropanol.
8. (Original) The method of claim 1, wherein, in step b), the annealing is performed with a variation of temperature and pressure conditions of the annealing medium.
9. (Original) The method of claim 1, wherein, in step b), temperature and pressure of the annealing medium are varied according to a periodic or non-periodic function.
10. (Previously Presented) An amorphous polymeric optical element produced by the method of claim 1.
11. (Previously Presented) A method for post-processing of an amorphous transparent polymeric optical element, which comprises:
annealing the amorphous polymeric optical element in a compressed gas, wherein the compressed gas is in a supercritical phase or a liquid or vapor phase approaching the supercritical phase, an annealing medium, and recovering the annealed amorphous polymeric optical element.
12. (Original) The method of claim 11, wherein the annealing is conducted at a temperature of about 10 to 100° C and a pressure of 2 to 200 atm.
13. (Previously Presented) The amorphous polymeric optical element of claim 10 which is a plastic optical fiber having a core and a clad, said core being made of polymethyl methacrylate and said clad being made of a copolymer of methyl methacrylate and tetrafluoropropyl methacrylate.